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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAE YONG PARK

Appeal 2007-3838
Application 09/878,401
Technology Center 2600

Decided: November 12, 2008

Before KENNETH W. HAIRSTON, JOSEPH F. RUGGIERO
and CARLA M. KRIVAK, *Administrative Patent Judges*.
HAIRSTON, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134 from a final rejection of claims 1 to 11. We have jurisdiction under 35 U.S.C. § 6(b).

We will sustain the obviousness rejection.

Appellant has invented an electro-luminescence display in which tape carrier packages connect driving circuit boards and an electro-luminescence panel in a planar state (Figs. 7 and 9; Spec. 8, 9, and 13).

Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. An electro luminescence display, comprising:
 - an electro-luminescence panel having a first face including a display area and an opposite face having a non-display area;
 - driving circuit boards for applying driving signals to a gate line and a data line provided on the opposite face having the non-display area of the electro-luminescence panel; and
 - tape carrier packages connecting the driving circuit boards and the electro-luminescence panel in a planar state.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Kawada US 6,774,872 B1 Aug. 10, 2004
(filed Sep. 27, 1999)

The Examiner rejected claims 1 to 11 under 35 U.S.C. § 103(a) based upon the teachings of Kawada.

ISSUE

Appellant contends *inter alia* that the obviousness rejection is based on improper hindsight reconstruction of Appellant’s invention because the applied reference to Kawada does not teach “providing tape carrier packages connecting the driving circuit boards and the panel in a planar state” (App. Br. 9). Thus, the issue before us is whether or not the applied reference teaches or would have suggested to one of ordinary skill in the art the claimed tape carrier packages “connecting the driving circuit boards and the electro-luminescence panel in a planar state?”

FINDINGS OF FACT

1. As seen in Figures 7 and 9 of Appellant's drawing, tape carrier packages 70 connect the driving circuit boards 52 and 54 and the electro-luminescence panel 50 in a planar state.

2. Kawada describes an electro-luminescence display device that comprises an electro-luminescence panel having a first face 15 including a display area, and an opposite face 11 having a non-display area (Fig. 4C; col. 1, ll. 5 to 8; col. 4, ll. 33 to 55). The display device has driving circuit boards 21 and 23 provided on the non-display area of the electro-luminescence panel (col. 4, ll. 33 to 55). A heat sink block 26 separates the driving circuit boards 21 and 23 from the surface of the opposite face 11 of the electro-luminescence panel (col. 4, ll. 33 to 55). A tape carrier package including leads 21a' and 21b' connects the driving circuit boards and the electro-luminescence panel in a planar state (col. 4, l. 56 to col. 5, l. 10).

3. In a prior art embodiment, Kawada shows the driving circuit board 23 in direct contact with the opposite face 11 of an electro-luminescence panel (Fig. 2; col. 2, ll. 38 to 44). Kawada describes this prior art embodiment as a non-preferred embodiment because of heat-dissipation problems (col. 2, ll. 45 to 57).

PRINCIPLES OF LAW

The Examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). If that burden is met, then the burden shifts to the Appellants to overcome the *prima facie* case with argument and/or evidence. *See Id.*

The Examiner's articulated reasoning in the rejection must possess a rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

An improvement in the art is obvious if "it is likely the product not of innovation but of ordinary skill and common sense." *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1742 (2007).

In an obviousness determination, "all the disclosures in a reference must be evaluated, including nonpreferred embodiments." *In re Mills*, 470 F.2d 649, 651 (CCPA 1972).

ANALYSIS

After consideration of the Examiner's reasons for finding the claims on appeal obvious, and the Appellant's arguments in rebuttal, we agree with the Examiner that the claimed invention is either taught by or would have been suggested by the applied reference.

Appellant's argument (App. Br. 10) that the driving circuit board 23 in Kawada is not provided on an electro-luminescence panel is without merit since the claims on appeal do not preclude the inclusion of the heat sink 26 between the electro-luminescence panel and the driving circuit board 23 (Findings of Fact 2).

As noted *supra* (Findings of Fact 3), Kawada's prior art Figure 2 shows a driving circuit board 23 in direct contact with the opposite face 11 of an electro-luminescence panel. Kawada recognizes that this prior art

embodiment has heat dissipation problems¹. It is because of the heat dissipation problem that Kawada prefers to place the driving circuit board 23 in indirect contact with the electro-luminescence panel via use of the heat sink 26. On the other hand, if space, as opposed to heat generation, was a more important consideration to the electro-luminescence display designer, then prior art Figure 2 of Kawada would be preferred over Figure 4C which consumes more space because of the use of the heat sink 26. Thus, Figure 2 of Kawada is a nonpreferred embodiment to Figure 4C, and is not a teaching away from Figure 4C as argued by Appellant (App. Br. 10 and 11). *See In re Mills* 470 F.2d at 651 (CCPA 1972).

With respect to Appellant’s argument (App. Br. 11; Reply Br. 3 and 4) that Kawada does not show the driving circuit boards and the electro-luminescence panel in a planar state, we agree with the Examiner’s reasoning (Ans. 3 and 5) that they are in a planar state because they are “*generally flat*.” As seen in Figures 2 and 4C of Kawada, the driving circuit boards and the electro-luminescence panel are in a planar state because they are indeed generally flat and are located parallel to each other.

In summary, Appellant’s arguments throughout the briefs do not convince us of any error in the Examiner’s positions in the rejection. *In re Oetiker*, 977 F.2d at 1445 (Fed. Cir. 1992). The Examiner’s obviousness rationale involves nothing more than common knowledge and common sense in the art, and the Examiner did not have to resort to impermissible hindsight as alleged by Appellant (App. Br. 12) to demonstrate the

¹ It appears that the same heat dissipation problems would exist in the disclosed and claimed invention since the driving circuit boards are in direct contact with the electro-luminescence panel.

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obviousness of the claimed invention. *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. at 1742 (2007); *In re Kahn*, 441 F.3d at 988 (Fed. Cir. 2006).

CONCLUSION OF LAW

The Examiner has established the obviousness of claims 1 to 11.

ORDER

The obviousness rejection of claims 1 to 11 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv).

AFFIRMED

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